UK regulatory approach to cryptoassets, stablecoins, and distributed ledger technology in financial markets:
Response to the consultation and call for evidence

April 2022
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Executive Summary

In January 2021, HM Treasury launched a Consultation and Call for Evidence on the regulatory approach to cryptoassets and stablecoins and the use of distributed ledger technology (DLT) in financial markets.

It set out the position that certain cryptoassets and DLT could drive transformational changes in financial markets and offer consumers new ways to transact and invest, but could also pose risks to consumers, market integrity and the stability of the financial system.

The government’s consultation sought views on how the UK can ensure its regulatory framework is equipped to harness such benefits, supporting the adoption of cutting-edge technologies, while mitigating the potential risks. Through its consultation, the government proposed a staged and proportionate approach to cryptoasset regulation, which is sensitive to risks posed and responsive to new developments in the market.

This response document confirms the government’s intention to take the necessary legislative steps to bring activities that issue or facilitate the use of stablecoins used as a means of payment into the UK regulatory perimeter, primarily by amending existing electronic money and payments legislation. The rationale for doing this is that certain stablecoins have the capacity to potentially become a widespread means of payment including by retail customers, driving consumer choice and efficiencies. It is, further, the government’s intention to consult later this year on regulating a wider set of cryptoasset activities, in view of their continued growth and uptake worldwide.

The government welcomes the work happening at international level on the regulation of cryptoassets, including stablecoins, and the UK continues to take a leading role in international fora. The government will ensure sufficient flexibility is built into the UK’s regulatory framework to allow regulators to adapt rules and requirements as international work concludes, benefiting too from the agility that will be afforded to UK financial services legislation by the Future Regulatory Framework.

The basis of the government’s proposal to bring stablecoins where used as a means of payment within the UK regulatory perimeter is broadly as follows:

a. The framework in the UK for e-money through the Electronic Money Regulations 2011 and Payment Service Regulations 2017 provides a robust foundation for payment firms in the UK. Although it does not today provide an explicit regime for regulating stablecoins, the government considers that an amended e-money framework can deliver a consistent framework to regulate stablecoin issuance and the provision of wallets and custody services. Establishing a regulatory environment for stablecoins used as payment simultaneously creates a basis to enable market entry to support innovation, while ensuring that appropriate regulatory standards apply for the benefit of customers, market integrity and stability.
b. In addition, the government plans to extend the applicability of Part 5 of the Banking Act 2009 to include stablecoin activities, to apply in cases where the risks posed have the potential to be systemic and so the threshold for Bank of England supervision is met. For entities authorised by the Financial Conduct Authority (FCA) and recognised under the Banking Act, the Bank of England will be the lead prudential authority.

c. To ensure effective competition continues to be a central aspect of the UK’s approach to financial services and future technological innovation, the government is of the view that it is also necessary to extend the scope of the Financial Services (Banking Reform) Act 2013 in order to ensure relevant stablecoin-based payment systems are subject to appropriate competition regulation by the Payment Systems Regulator (PSR).

Taken together, these changes will create the conditions for issuers and service providers of stablecoins used as a means of payment to operate and grow in the UK, in line with the government’s firm commitment to place the UK’s financial services sector at the forefront of cryptoasset technology and innovation. For consumers, bringing stablecoins into the regulatory framework means they will be able to use stablecoin services with confidence. The government will introduce this legislation when Parliamentary time allows, to deliver a world-leading regulatory regime for stablecoins.

The government also conducted a Call for Evidence on the investment and wholesale uses of DLT in financial markets. The government recognises the substantial benefits and transformative impact that could be delivered by DLT when adopted in Financial Market Infrastructures (FMIs), though the process of adopting these technologies needs to be managed carefully to ensure that any new risks arising are appropriately addressed. The government intends to support industry in ensuring that regulations can accommodate tokenisation and DLT in FMIs, and is developing an FMI Sandbox (to be up and running in 2023) to support firms wanting to innovate, including by using these technologies to provide FMI services. The government intends to work collaboratively with regulators and industry to identify and manage any issues relating to the adoption of DLT.

The government also posed broad questions on the role of other forms of cryptoassets used primarily as retail investments and the growth of decentralised finance. The government’s planned consultation on cryptoasset regulation will set out proposals for these innovations, reflecting feedback received.
Chapter 1

Introduction

1.1 In January 2021, HM Treasury launched a Consultation and Call for Evidence on the regulatory approach to cryptoassets and stablecoins. The government’s consultation sought views on how the UK can ensure its regulatory framework is equipped to harness the benefits of new technologies, supporting innovation and competition, while mitigating risks to consumers, market integrity and financial stability. Proposals were informed by views from the UK’s Cryptoassets Taskforce¹, which was established in 2018 with a mandate to consider the risks and benefits posed by cryptoassets and distributed ledger technology (DLT) in the UK, and to advise on the appropriate regulatory response.

1.2 In total, the government received 89 responses from a broad range of organisations, industry trade bodies, universities and individuals.

1.3 Since the consultation was launched, the cryptoasset market has continued to develop at pace, with the total market capitalisation for cryptoassets estimated to have reached between $2.6-3 trillion in 2021 and falling over recent months to $2 trillion.² While decentralised finance remains relatively small, it is nonetheless growing fast, from less than $10bn at the start of 2020 to nearly $100bn in September 2021.³ Consumer research from the Financial Conduct Authority (FCA) suggests the uptake of cryptoassets among UK consumers has also continued to increase, with 2.3 million adults now estimated to hold cryptoassets (up from 1.9 million last year).⁴ Global policymakers have also noted its growing interconnectedness with the wider financial system.⁵

1.4 The government considers that clear and proportionate regulation is essential to fostering competition and innovation in a fast-evolving sector. Against this backdrop, the government and regulatory authorities have already taken (or are in the process of taking) a number of steps to address the most pressing gaps in the regulatory framework—

a. Implementing a new anti-money laundering and counter terrorist financing (AML/CTF) regime for cryptoassets⁶; and proposing amendments to implement the Financial Action Task Force (FATF) “travel rule” for transfers of cryptoassets.⁷ HM Treasury is considering submissions to its recent consultation and will publish a future response;

¹ Membership includes senior representatives from the Bank of England, Financial Conduct Authority and HM Treasury. It is also attended by the Payments Systems Regulator.
² According to online sources CoinGecko and Coinmarketcap.com, but are unverified.
³ See https://www.bankofengland.co.uk/speech/2021/october/jon-cunliffe-swifts-sibos-2021
⁴ See https://www.fca.org.uk/publications/research/research-note-cryptoasset-consumer-research-2021
⁵ See for example: https://www.imf.org/—media/Files/Publications/GFSR/2021/October/English/ch2.ashx
⁶ See https://www.fca.org.uk/firms/financial-crime/cryptoassets-aml-ctf-regime
b. Confirming the intention to extend the scope of the UK’s financial promotions regime to cryptoassets;\(^8\)

c. Addressing consumer risk through regulator consumer warnings and increasing overall consumer education about crypto investments.

1.5 In terms of future regulatory development, the government proposed in its consultation a staged and proportionate approach to regulation, which was sensitive to risks posed, and responsive to new developments in the market. In particular, the consultation highlighted that newer-developing forms of cryptoassets – stablecoins – had the potential to develop into a widespread means of payment, and potentially deliver improvements in payments transactions, especially for cross-border transactions. At the same time, depending on scale and the nature of their use, they could pose similar financial stability and consumer risks as traditional regulated payments. In this regard, stablecoin has a potential ‘mainstream’ use that is distinct from other forms of cryptoasset (which are more akin to a form of investment than a means of payment).\(^9\)

1.6 The government therefore intends to bring activities facilitating the use of certain stablecoins, when used as a means of payment, into the UK regulatory perimeter. This will be done primarily by amending existing payments legislation, enabling the UK’s regulators to set firm-facing requirements in a framework set by government and Parliament. In line with the government’s staged approach to regulation, it is likely that future regulation will be needed for the wider market in cryptoassets, to respond to growing developments in the sector and to facilitate responsible innovation. The government will therefore consult later this year on bringing wider forms of cryptoasset activity within the UK regulatory perimeter.

1.7 The government also conducted a Call for Evidence on the investment and wholesale uses of tokenisation and DLT in financial markets. The government recognises the substantial benefits that could be delivered by DLT when adopted in FMI\(_s\), particularly in enabling greater efficiency, transparency and resilience. However, the adoption of DLT in FMI\(_s\) could lead to a fundamental change in existing structures and practices, such as for trading venues undertaking settlement activities, though the scale and nature of these changes could present substantial challenges and would need to be managed carefully.

1.8 The government intends to support industry in ensuring that current legislation and regulation is adapted to accommodate tokenisation and DLT in FMI\(_s\), whilst ensuring that broad regulatory outcomes are still met, and on the basis that legislation should be technology neutral. To aid this, the government will implement a Financial Market Infrastructure Sandbox, which will be up and running in 2023. The FMI Sandbox will support firms wanting to use technologies such as DLT to provide FMI services; this may include, for example, entities being provided with modifications to existing legislation, rules and standards where they act as a barrier to adoption. The Sandbox will enable the government and regulators to understand what changes need to be made to legislation (both to enable the adoption of new technology and

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\(^8\) See: [https://www.gov.uk/government/consultations/cryptoasset-promotions](https://www.gov.uk/government/consultations/cryptoasset-promotions)

\(^9\) For example, the Government’s consultation (p.13-14) observed that 27% of stablecoin owners have used them to purchase goods and services, compared with nearly half (47%) of UK cryptoasset consumers who said they bought cryptocurrencies ‘as a gamble that could make or lose money’. 89% of these respondents understood that cryptoassets were not subject to regulatory protections.
to manage any new risks) and ensure they can implement any changes and additional requirements.

1.9 The government intends to work collaboratively with regulators and with industry to identify and manage any further issues relating to the adoption of DLT, particularly when considering the impact of DLT on existing market structures and practices. The government also recognises the importance of common standards in facilitating DLT and will consider with industry how to take work forward here both domestically and internationally.

1.10 The government also posed broad questions on the role of other forms of cryptoassets used primarily as retail investments and the growth of decentralised finance. The government’s planned consultation on cryptoasset regulation will set out proposals for these innovations, reflecting feedback received.

1.11 The remainder of this document is split broadly into two. The first half outlines the government’s overall policy approach to cryptoassets and the government’s proposed regulatory regime in relation to stablecoin, where used as a means of payment, specifically. The second half of the document sets out the government’s response to feedback on proposals to support the use of DLT in financial markets.
The government’s approach to stablecoins

Bringing stablecoins, where used as a means of payment, into the regulatory perimeter

2.1 Through the government’s consultation on stablecoins, a number of broad themes emerged:

a. **A broad consensus on the need for international coordination** of regulation, and close collaboration with other jurisdictions.

b. **General agreement that a UK regulatory framework for stablecoins needs to be flexible enough to respond to rapid innovation**, though some respondents requested a more detailed taxonomy, in light of the differing uses of stablecoins.

c. **General agreement that systemically important entities (e.g. systemic stablecoin issuers and wallets) should be subject to Bank of England regulation**, with respondents seeking further guidance on the thresholds for reaching systemic status.

d. **Broad agreement that stablecoins referenced to a single currency should be subject to similar requirements as e-money**, though a number of respondents highlighted that some current or proposed business models would not currently meet these regulatory standards.

e. **A wide variety of views on the approach to ‘unbacked’ cryptoassets other than stablecoins, e.g. Bitcoin, some called for further regulation (for example, market abuse and prospectus-type rules); others argued that unbacked cryptoassets should not be subject to further financial services regulation given their unique qualities.**

2.2 Through the consultation, the government also sought areas of specific and targeted feedback, including on how to classify cryptoassets, including stablecoin, in UK regulation. The consultation noted the FCA’s 2019 publication, ‘PS19/22 Guidance on cryptoassets’\(^{10}\), which described three broad categories of token: e-money tokens, security tokens and unregulated tokens – exploring if these terms should continue to be adopted, and if a new category of ‘stable tokens’ should be additionally created. This new category of token would refer to tokens which stabilise their value by referencing assets such as fiat currency (i.e. those commonly known as stablecoins) and could more reliably be used as a means of exchange or store of value.

2.3 The majority of respondents supported the proposal to continue using a classification that is broadly consistent with existing guidance issued by UK authorities. Respondents also supported supplementing existing guidance with new categories where it is appropriate. Respondents agreed with the government’s proposal to

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develop a UK taxonomy, while urging the government to ensure international cohesion and support consistent definitions and a common understanding.

In its 2021 consultation, the government asked for views on:

1. Continuing to use a classification that is broadly consistent with existing guidance issued by UK authorities, supplemented with new categories where needed.
2. The proposed new regulated category of ‘stable tokens’.

2.4 Respondents also observed that given the rapidly evolving market and hybrid nature of many tokens, it was important that any classification be sufficiently flexible. Feedback highlighted the importance of having the ability to further adapt classifications to reflect definitions adopted at the international level. Despite this desire for flexibility, there were also a number of calls for more granular categorisation, with the flexibility to update guidance as new models or uses emerge. Some respondents noted that some existing uses were not covered in the categories discussed in the consultation – or should be explicitly carved from scope. Examples given included deposits recorded on DLT, settlement tokens, and hybrid tokens.

2.5 For stablecoin specifically, some respondents questioned the use of ‘stable token’ instead of the more widely accepted term ‘stablecoin’. They also noted the different characteristics and risks presented by tokens which maintain a stable value (e.g. between tokenised forms of central bank money and privately issued tokens which reference their value from other assets). Respondents highlighted that different stablecoins may require a different regulatory treatment and that the UK regime should account for that. Similarly, some respondents called for a clearer delineation between stablecoins which are linked to a fiat currency and stablecoins which reference other assets.

2.6 Respondents also highlighted the importance of a clearly defined scope for consumers and market participants seeking to navigate the UK’s regulatory framework. Respondents also queried the regulatory treatment of a number of different stablecoins.

2.7 Following consideration of the responses, the government maintains its position that, in a fast-growing and nascent area of financial services, the regulatory framework for cryptoassets and classifications ought to be designed with flexibility, since static classification or definitions could quickly become outdated. In designing that flexibility, however, the government recognises that clarity must be achieved to ensure that market participants are able to identify where activities fall within the perimeter and the requirements and obligations that this entails.

2.8 The government considers that some forms of digital money or tokens – for example, those intended for wholesale settlement – may already fall within the relevant UK legal frameworks. However, this also depends on the structure of the token and nature of the activities concerned.
2.9 Future legislation will provide a clear framework in the UK, providing clarity as to the scope of activities to which the regime applies. The government expects this to be supplemented by further detailed information on activities and tokens in scope from the relevant financial regulators.

2.10 With respect to stablecoin used as a means of payment specifically, the government proposes that the regulation should capture all stablecoins that reference fiat currencies, including a single currency stablecoin or stablecoin based on a basket of currencies. This takes on board arguments made about the diversity of models and uses of stablecoins, and the government’s priority to regulate those that have the capacity to potentially develop into a widespread means of payment. In light of stakeholder feedback and the desire for more commonly understood methodology, the government has also decided to adopt the terminology of ‘stablecoin’.11

2.11 The government will also continue to work closely with international partners, to harmonise guidance and concepts where possible. The government has sought to reflect the Financial Stability Board’s (FSB) recommendations on the regulation, supervision and oversight of global stablecoin arrangements12, and the CPMI-IOSCO consultative report13 on the application of the Principles for Financial Market Infrastructures to stablecoin arrangements, and will leave room to update the regulatory framework as international standards are developed.

2.12 Greater flexibility to maintain the UK’s regulatory regime will also be supported by the introduction of the Future Regulatory Framework, which will make it easier to adjust retained EU law and give the ability to regulators to set regulatory rules instead of relying on prescriptive, inflexible legislation. This will extend to the FCA’s regulatory framework for payments services and e-money (including once stablecoin activities are brought into that regime), creating a regulatory framework that can better adapt as the market develops.

Objectives, principles and design

2.13 The government’s consultation sought views on a number of objectives and principles to guide the design of the UK’s regulatory regime for stablecoins and understand the respective priorities in order to promote competition, innovation and support UK competitiveness; protect financial stability and market integrity; and deliver robust consumer protection.

2.14 In addition, the consultation sought feedback on the proposal that the government should broadly define the scope of the regulatory perimeter, objectives and principles in statute, with detailed rules provided by the UK’s independent regulators.

2.15 A question was also asked on what, if any, location requirements should apply to entities subject to the new regulatory framework.

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11 For the avoidance of doubt, this expression is not intended to bear a relation to references to “coin” or “coinage” present in other legislation.
13 https://www.bis.org/cpmi/publ/d198.htm
In its 2021 consultation, the government asked:

1. For views on its proposed objectives and principles for cryptoassets regulation, including whether certain ones should be prioritised and whether there may be tension between them.

2. Whether respondents agreed with the approach outlined, in which the regulatory perimeter, objectives and principles are set by government and HM Treasury, with detailed rules to follow set by the UK’s independent regulators.

3. For views on the extent to which the UK’s approach should align to those in other jurisdictions.

4. For views on location and legal entity requirements.

2.16 Feedback from respondents included a wide range of views on how objectives and principles should be prioritised. A large number of respondents were supportive of the intention to ensure the UK’s approach is agile and aligns to international standards. However, some respondents noted a possible tension between the aim to retain rulemaking ‘agility’ and a preference for regulatory certainty. Respondents also highlighted the importance of mechanisms for continued industry and expert engagement in a fast-evolving area which has largely operated without regulation to date. Some respondents pointed to the experience of UK cryptoasset businesses in adapting to new anti-money laundering/counter-terrorist financing requirements to support this.

2.17 Many industry respondents called for innovation and competition to be prioritised, highlighting the potential opportunities for the UK to attract innovative firms following the UK’s departure from the EU. However, some stakeholders felt that this should not be at the expense of robust consumer protection, citing high levels of fraudulent activity in cryptoasset markets, market integrity concerns and evidence of consumers experiencing significant losses.

2.18 Respondents overwhelmingly agreed that the regulatory perimeter, objectives and principles should be set by government and Parliament, with firm-facing rules set by the UK’s independent regulators. However, many respondents emphasised that rules implemented by the regulators should be developed in close consultation with industry. Several respondents highlighted challenges faced by a relatively nascent industry in adapting to anti-money laundering and counter-terrorist financing regulation, and highlighted the need for effective implementation and sufficient capacity and expertise across the UK’s regulators. Respondents also noted the importance of intelligence, data monitoring and information sharing across the UK regulators.

2.19 The vast majority of respondents stated that global alignment is particularly important in a sector which operates on a borderless basis, and highlighted the risk that firms seek to circumvent requirements in individual jurisdictions without internationally agreed standards. However, beyond this generally held principle, differing views emerged as to the stance the UK should adopt. Many stated they would like to see the UK take a global leadership position with the aim of steering the
global regulatory guidance. Others suggested the UK should prioritise developing harmonised rules through international organisations and standard-setting bodies, ahead of implementing a UK-specific regime. Others proposed that if a global framework cannot be achieved, an alternative option could be minimum operating and conduct standards for currently unregulated cryptoasset activities.

2.20 On the issue of location requirements, there was some support from respondents for requiring firms to be authorised in the UK in order to actively market stablecoin to UK consumers. Some noted that it is not appropriate to introduce a location requirement for overseas issuers or service providers of tokens, but rather that the marketing and promotion of tokens into the UK which is directed to certain categories of investors should be regulated where appropriate. Others suggested that if a firm was issuing a GBP stablecoin they should do so under the authority of the UK wherever they are based. The reason stated for this is that a lack of location and legal entity requirements for providers of stablecoin services would unduly increase the overall threat stablecoin could pose to financial stability, both in the UK and internationally. Those that supported location and legal entity requirements believed these should be based on the activity being conducted and the materiality of that activity.

2.21 There was also, however, broad consensus that location requirements would be challenging to enforce due to the global nature of stablecoins, and that they could stifle innovation.

2.22 Several respondents argued that the UK should ensure its overall regulatory approach is not more onerous than that in other jurisdictions. Those respondents argued that the government should ensure it adopts an approach that puts it in a strong competitive position to attract technology-driven investment and new business to the UK.

2.23 Following consideration of the responses, the government will broadly maintain the principles and objectives described in the consultation paper and use these to continue to monitor the framework and regulatory requirements required. The government’s view is that clear and proportionate regulation is essential to creating a framework in which the sector can continue to innovate.

2.24 A number of respondents noted concerns relating to the environmental impact of certain cryptoassets and called on the government to factor these impacts into its future regime. The government reiterates its firm commitment to positioning the UK at the forefront of green finance and recognises the issue of rising energy consumption from certain cryptoassets; the government’s consultation later this year on regulating a wider set of cryptoasset activities will reflect green commitments and ensure that the approach is aligned to environmental objectives including the UK’s net zero target. In this context, the government notes that some stablecoins may be based on ‘proof of stake’ blockchain systems and may not face energy-consumption issues which typically relate to the ‘mining’ or proof-of-work process underpinning certain cryptoassets. The government welcomes the efforts of some cryptoassets to move to more energy efficient ‘proof of stake’ processes.

2.25 With respect to the design of future regulation, the government will maintain the proposed approach in which the regulatory perimeter, objectives and principles are set by government and HM Treasury, with detailed rules set by the UK’s independent regulators. This approach is consistent with the government’s proposals
under the Future Regulatory Framework Review.14 The government judges that this agile approach will allow the UK to capitalise, to the fullest extent, on the freedoms gained by the European Union. It will enable UK regulators to adapt to new developments in the market, including internationally, and adapt rules to ensure they work for consumers and market participants.

2.26 The government will also continue to work with international partners to ensure common standards, recognising the borderless nature of cryptoassets activity. In this, the government welcomes the consultative report of CPMI-IOSCO15, which confirms that the common international standards for payments systems, the Principles for Financial Market Infrastructure, apply to any systemic stablecoin arrangements used for payments, and provides guidance on addressing their novel features. The government also supports the ongoing monitoring and coordinating role of the Financial Stability Board (FSB), and its progress report on the implementation of its recommendations for global stablecoin arrangements.

2.27 In terms of jurisdiction, wallet providers and other entities providing stablecoin activities for payments in the UK must be authorised by the FCA and would, if deemed systemic, also be subject to Bank of England supervision.

2.28 With respect to location-based obligations specifically, the government notes that certain location requirements already exist in UK payments legislation as a condition of authorisation, notably under the Payment Services Regulations 2017 and Electronic Money Regulations 2011 –separate from the additional question of what location requirements may be applied to systemic stablecoins under Bank of England supervision. Where stablecoins are brought into the existing regulatory perimeter covered by the FCA’s Regulations, the requirements of the Regulations will apply, including provisions requiring entities to be based in the UK. This is relevant where firms may be dual regulated by the FCA and Bank of England in the future.

2.29 The government recognises that making further adjustments to location requirements in a stablecoin-specific context may interact with the regulatory treatment of other payments-related activities. Further consideration of the topic would be beneficial in the context of broader future consultation, such as the government’s consultation on the systemic perimeter for payments planned later this year.

Expanding the regulatory perimeter: considerations and sequencing

2.30 Through the consultation, the government sought views on how best to sequence proposed regulatory reforms, in order to focus on where opportunities and risks were most acute. Specifically, the government proposed:

- Focusing the first phase of legislative changes on stablecoins used as a means of payment. This reflected the propensity of stablecoin to potentially become a widespread means of payment and store of value;

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15 The Committee on Payments and Market Infrastructures and International Organization of Securities Commissions
• Considering the case for bringing a broader set of cryptoassets (such as Bitcoin) into a regulatory regime to a longer timetable. In the interim, applying regulation in relation to consumer communications via the financial promotions regime, alongside anti-money laundering and counter-terrorist financing regulation.

2.31 In testing these proposals, the consultation sought to understand if respondents agreed with the government’s assessment of the benefits and risks, underpinning the proposed approach. The consultation highlighted the potential competitive benefits from using stablecoins as a means of payment to challenge incumbents; the potential to deliver greater speed, efficiency and resilience through distributed-ledger technology; and to potentially support financial inclusion and economic growth, including across borders. In addition, the government identified potential risks from stablecoins used as a means of payment (in the absence of regulation) to financial stability and market integrity, as well as to consumers and competition. The government considered that appropriately designed regulation could promote innovation and industry growth, enabling responsible industry actors to innovate while ensuring the protection of consumers and the market.

2.32 There was broad agreement from respondents regarding the government’s assessment of opportunities and risks. A large number of respondents focused on potential risks to consumers and highlighted the importance of awareness and education. Several consumer groups called for a broader conversation directed at consumers about the different forms of cryptoassets and the risks they present. A number of respondents highlighted the role of cryptoassets in potentially facilitating financial crime and fraud, as well as ongoing concerns about market manipulation within the industry. Other areas of risk noted by respondents included operational risk; pricing pressure linked to demand; corporate balance sheet risk; and regulatory oversight and enforcement risks for a new asset class.

2.33 Respondents also noted a number of specific possible benefits, including improved financial inclusion and accessibility; reduced transaction costs; faster payment settlement times; and greater transparency of costs.

2.34 In turn, there was broad agreement among respondents that the ‘backed’ nature of stablecoins makes them similar to traditional financial instruments and that there is a strong argument for bringing them within the regulatory perimeter. There was further support for HM Treasury’s technology agnostic approach, where the focus is on regulating the activity rather than the underlying technology. Respondents also
agreed that it was right to focus legislative changes on stablecoins initially, while noting the need to ensure that there are suitable carve-outs for tokens which may already fall within existing regulations to avoid firms having to follow two sets of regulations for the same activities.

2.35 In aggregate, a significant majority of respondents agreed that the proposed approach balanced the government’s stated objectives and principles, although there were mixed views on the effect of bringing stablecoin used as a means of payment into the regulatory perimeter. Some respondents suggested that bringing stablecoins into the scope of the regulatory perimeter would reduce the risks to financial stability and market integrity arising from the increasing use of these tokens as a means of payment and would also go a significant way to enhancing consumer protection. Respondents stated that limiting the scope to these tokens at this stage should also help to promote competition and innovation.

2.36 Conversely, some respondents warned that introducing regulation could have an impact on the usage of stablecoins as a means of payment and may drive consumers to use unregulated tokens instead, which may give rise to financial stability and consumer protection concerns. Market abuse regulation was also cited as a potential gap that could lead to consumer risks and inhibit growth in the wider ‘unbacked’ cryptoasset market.

2.37 In light of the feedback received, the government will continue to focus the first phase of legislative changes on bringing stablecoins used as a means of payment into the UK’s regulatory perimeter. The use of stablecoins in retail payments is emerging, and the government considers that with appropriate protections, stablecoins could play an important role in facilitating improvements and competition in payments.

2.38 The market for stablecoins is also growing. The FSB’s progress report on the implementation of the FSB recommendations states that the total market capitalisation of stablecoins reportedly stood at around $123 billion in September 2021, as part of the broader growth of the cryptoasset market. The largest existing stablecoin is Tether, with a reported market capitalisation of approximately $68bn. In the past year, other stablecoins, such as USD Coin and Binance USD, have also reached considerable market capitalisations.

2.39 However, the government notes that stablecoins are currently predominantly used to facilitate trading and investment activities in unbacked cryptoassets, like Bitcoin, and also play a critical function in emerging decentralised finance applications. The government is of the view that this will need to be further considered under a further extension of the regulatory regime to include other activities beyond stablecoins used as a means of payment.

2.40 Despite prioritising regulation for stablecoins used as a means of payment as an initial step, the government considers that additional regulation of a broader set of cryptoasset activities, particularly as a means of investment, should form a second legislative phase. This is needed to respond to the increasing uptake of wider cryptoassets; the risks to consumers and markets of their remaining outside the regulatory perimeter for an extended period; and in order to create a regulatory environment in which these services can responsibly innovate. A further consultation will follow later this year.
Stablecoin legislation: scope and requirements

2.41 Following consultation and the broad support for the approach proposed, the government intends to extend the existing payments regulatory regime to cover issuers of stablecoins and entities providing related services.

2.42 The government intends to do this by amending existing legislation governing electronic money and payments (and other relevant legislation) at the earliest available opportunity. The government believes that many stablecoins that reference fiat currencies share characteristics with existing e-money. Bringing these stablecoins into the regulatory perimeter for payments therefore critically meets the government’s stated objective of ‘same risk, same regulatory outcome’. The government also considers that this approach avoids opportunities for regulatory arbitrage between traditional e-money and stablecoins and provides greater clarity for firms and consumers.

2.43 The principal legal instruments that will require amendment are the Electronic Money Regulations 2011, the Payment Services Regulations 2017 and Parts 5 of the Banking Act 2009, and the Financial Services (Banking Reform) Act 2013. In turn, this means that a regulatory mandate in relation to stablecoin will be developed for each of the Financial Conduct Authority, Bank of England, and Payment Systems Regulator, as is the case today for traditional payment services and e-money where there is a need to consider co-responsibility for regulation between the three authorities.

Regulation by the Financial Conduct Authority

2.44 The Electronic Money Regulations 2011 and Payments Services Regulations 2017 provide powers principally to the FCA\(^{16}\) to regulate and supervise firms engaged in relevant payment activities. The regulations operate on the basis of an authorisation or registration regime, requiring an application to the FCA in order for a firm to be permitted to provide services in the UK. The legislation establishes the prudential requirements (such as capital requirements), in addition to the essential conduct and operational standards that firms must meet. The FCA has a combination of rulemaking and enforcement powers as the designated competent authority.

2.45 The government considers that the regulatory framework provides a robust foundation for payment and e-money firms in the UK. While it may not be applicable on a strictly like-for-like basis to stablecoins, an adjusted framework could be used as a vehicle to regulate stablecoin issuance and wallet providers on an appropriate, consistent and level basis.

2.46 In its consultation, the government proposed that rules and requirements under the UK stablecoin regime would take relevant aspects of the UK’s current approach to e-money and payment services regulation, drawing on existing rules as far as possible. The consultation proposed to:

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\(^{16}\) The Payment Systems Regulator also has some limited regulatory areas of competence in relation to payment systems (and ATMs) under the Payment Services Regulations.
• Establish an FCA authorisation and supervision regime that would capture stablecoins which could be used as a means of payment. It also outlined the broad requirements, activities and functions that would be captured as part of the regime. It proposed that these requirements would be lighter for smaller firms, mirroring existing arrangements.

• Exclude certain stablecoins (namely algorithmic stablecoins, or those that may be linked to assets other than fiat currency) from scope, on the grounds that they share similar characteristics to unbacked cryptoassets (i.e. they do not reference their value by fiat currency and may not offer sufficient price stability).

• Allow for exclusions to the authorisation and supervision regime, in line with current payments and e-money regulation, where a firm may conduct an activity that falls within scope, but the nature of that activity is exempted or does not require authorisation.

2.47 The consultation also sought a number of views from correspondents to better shape and receive feedback on the proposed regulatory regime.

In its 2021 consultation, the government asked:

4. Whether respondents agreed that the activities and functions outlined are sufficient to capture the activities that should fall within the scope of regulation.

5. Whether respondents agreed that the government should primarily use existing payments regulations as the basis of the requirements for a new stablecoin regime, applying enhanced requirements where appropriate on the basis of mitigating relevant risks and what other existing legislation and specific requirements should also be considered.

6. Whether respondents agreed with the high-level requirements outlined and whether any additional requirements are needed.

7. For views on whether single-fiat tokens should be required to meet the requirements of e-money under the EMRs, with possible adaptation and additional requirements where needed.

8. For views on whether exclusions to the authorisation regime are needed in relation to the stablecoins regime, in light of the government’s objectives and, if so, which activities should be excluded.

9. For views on the appropriate classification and treatment of tokens that seek to maintain a stable value through the use of algorithms.

2.48 Most respondents agreed that the UK’s existing payments regulations offer a good basis for stablecoins, particularly those used in retail payments, where the Electronic Money Regulations 2011 and Payments Services Regulations 2017 are
primarily applicable. Respondents noted that the regulations are well-understood and have been established over a number of years. However, some responses highlighted potential risks from seeking to retrofit existing requirements on the basis that it may be difficult to future-proof them and capture new innovations in the market, or that they may be inappropriate for tokens used in the wholesale market.

2.49 The majority of respondents agreed that the activities and functions outlined in the consultation were sufficient to capture the activities that should fall within the scope of regulation. This included the activities of issuing, creating or destroying tokens; value stabilisation and reserve management; validation of transactions; access; transmission of funds; providing custody services for a third party; executing transactions in stablecoins; and exchanging tokens for fiat currency.

2.50 Most respondents also agreed in principle with the high-level requirements the consultation expected would apply, including: authorisation requirements with associated conditions for authorisation; prudential requirements; requirements for the maintenance and management of a reserve of assets; orderly failure and insolvency requirements; safeguarding the token; systems, controls, risk management and governance; notification and reporting; record keeping; conduct requirements; financial crime requirements; outsourcing requirements; operational resilience, service reliability and continuity requirements; and security requirements.

2.51 Several respondents asked for further detailed guidance on the functions and activities in scope (for example, whether decentralised organisations that issue stablecoins via smart contracts would be within scope). Respondents also sought detail on the types of requirements that would apply, such as whether the regime would include strong customer authentication requirements. Some respondents noted concern about potential overlaps between new requirements and those in relation to existing regimes, in particular the UK’s AML/CTF registration regime for cryptoasset businesses.

2.52 In relation to whether tokens referencing a single fiat currency should be required to meet e-money requirements, responses were broadly supportive. Some felt that the Electronic Money Regulations 2011 would be a good starting-point but suggested that amendments may be needed due to definitional issues and potential additional risks posed, meaning that certain current business propositions may currently fall out of scope. Others felt that there should be a separate regime to account for differences in the way stablecoins operate.

2.53 There was general agreement that unbacked tokens that seek to maintain a stable value through the use of algorithms should be regarded as different to asset-backed stablecoins. However, views on how to approach them varied – some felt that they fit in the category of unregulated exchange tokens (and as such should not be subject to comprehensive regulation), while others thought doing so may offer an arbitrage opportunity and so they should be subject to a regulatory regime to address potential consumer harm or financial stability risks. It was also suggested that such tokens may become more stable with scale.

2.54 On the topic of whether exclusions to the authorisation regime are needed, several respondents noted the existing exemptions in the Electronic Money Regulations 2011 and Payment Services Regulations 2017 would be broadly applicable. Other activities that respondents suggested should be out of scope included non-custodial wallets (which give control of the wallet to individuals and not
a third party), and validation of transactions and access, where these functions are delivered by technology firms that are not involved in buying/selling tokens.

Changes to the FCA’s e-money and payment services regimes

2.55 After carefully considering responses to the consultation and via ongoing consultation with the UK’s regulators, the government’s proposed regulatory approach will entail changes to the e-money and payment services regimes to provide the FCA with appropriate powers over stablecoin issuers and other entities, including wallet providers. The approach will ensure convertibility into fiat currency, at par and on demand. FCA guidance and rules will set out in detail the requirements that apply to specific activities.

2.56 The existing payments framework would need to be adjusted to cater for this model and the government therefore intends to make appropriate amendments to certain aspects of the regulations, for example the definition of e-money.

2.57 Overall, the government is minded to develop a definition for ‘payment cryptoasset’ (or something similar) that brings into scope any cryptographically secured digital representation of monetary value which is, among other things stabilised by reference to one or more fiat currencies and/or is issued and used as a means of making payment transactions.

2.58 It is proposed that a definition along these lines would capture all stablecoins that reference fiat currencies, including a single currency stablecoin or stablecoin based on a basket of currencies.17

2.59 This would, intentionally exclude a number of existing stablecoin models, including stablecoins which stabilise their value by referencing other assets such as commodities. Having further considered feedback, and following detailed engagement with the FCA, the government considers that in practice those tokens are unlikely to meet the minimum requirements that are expected from a token used in retail payments. Further, as noted in feedback, depending on the particular structure of the arrangements, many tokens which stabilise their value by referencing other assets, like commodities, may already fall within the regulatory perimeter (e.g. as specified investments). Though this is subject to a case-by-case assessment.

2.60 Stablecoins and their underlying technical and contractual arrangements can vary significantly. Notably, in some arrangements, the stablecoin issuer may not offer holders a legal claim on the issuer. This means that the right of a customer to redeem the value of the token (or against a reserve of assets) may sit with a third party, or may not exist at all. In contrast, offering a claim against the issuer is firmly established within the definition of traditional e-money: “stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions…”.

17 The legislation would also capture instruments achieving the same effect, e.g. a stablecoin referencing another stablecoin linked to fiat money, or an instrument which derives its value predominantly from reference to fiat currency.
2.61 Within the new regulatory regime proposed for stablecoins, the government consider that it would be unacceptable for there to be no legal claim at all for the customer, as this would fail to deliver the level of consumer protection necessary and would not provide equivalence between traditional e-money and stablecoin used as a means of payment. However, given the particular characteristics of stablecoins and that the customer relationship may be with a third-party intermediary (such as a wallet), the government considers that customers should generally be able to make a claim to either the stablecoin issuer or, where appropriate, the consumer facing entity. The legal requirement would continue to sit with the issuer but requiring the issuer to fulfil directly the legal claim requirement is a high bar, which may only be necessary in systemic cases. In cases of systemic risk, and where judged necessary, the Bank of England may seek to require a direct legal claim on the issuer to address financial stability risks. The statutory redemption rights set out in the Electronic Money Regulations 2011 would also apply.

2.62 The government also intends that safeguarding requirements, which exist today under the Electronic Money Regulations 2011, will apply to customer funds received in exchange for issuing a stablecoin. Safeguarding rules are designed to protect customer funds if an institution becomes insolvent and includes, for example, the requirements that funds are either held in a separate account from the institution’s working capital, invested in high quality liquid assets, or are covered by an appropriate insurance policy or comparable guarantee. It means in practice that each £1 token issued will need to be safeguarded with £1GBP, and those funds cannot be used for any purpose (e.g. lending). Further detail on how this will be enacted in a stablecoin-specific context would be set out by the FCA.

2.63 More widely, the broad apparatus and key features of the Electronic Money Regulations 2011 would apply to stablecoin issuance, ensuring consistency with traditional e-money regulation.

2.64 With respect to exemptions from the regulatory regime, the government proposes to impose broadly the same set of exemptions which exist within the Electronic Money Regulations 2011 to stablecoins. This includes, for example, the limited network exclusion.

2.65 Finally, the Electronic Money Regulations 2011 and Payment Services Regulations 2017 also establish their own, tailored requirements in relation to consumer protection.

Introduction of a new regulated custodial activity

2.66 The role of the wallet provider is a key feature of cryptoassets, unlike traditional e-money. Customer interaction with a stablecoin (i.e. onboarding the customer and providing access to the token) often takes place through the third-party wallet provider (or an exchange), which hold the stablecoin or the means of access to the stablecoin (i.e. the ‘private key’) on behalf of consumers using their services. This allows for stablecoins to be exchanged without redemption of the underlying funds via the issuer. The issuer instead holds the assets or funds backing the stablecoin, whereas the wallet provider or exchange provides access to the token.

2.67 The government considers that regulation is therefore required to ensure the custody or arranging the custody of the token is subject to appropriate regulation.
The intention would be to cover the act of someone other than the issuer holding the stablecoin used as a means of payment (or means of access to the stablecoin) on behalf of a third party. It would be intended to capture wallet providers or any firms (e.g. exchanges) offering similar services. It would therefore bring within the UK regulatory perimeter firms that provide services to custody or arrange the custody of stablecoins used as a means of payment on behalf of customers.

2.68 The government will set out in legislation how that new activity will be brought within the regulatory perimeter, and the FCA’s powers. Bringing custody into the regulatory perimeter will bring this activity into the UK’s jurisdiction, requiring authorisation by the FCA. The government and regulators will provide further detail on exclusions to this regime in due course.

2.69 The FCA will establish the detailed set of regulatory rules applicable to stablecoin custodians, covering for example:

- Prudential and organisational requirements;
- Reporting requirements;
- Conduct of business requirements;
- Operational resilience;
- Custody/safeguarding requirements;
- Consumer protections.

2.70 Where a firm providing custody (or arranging custody) also meets the requirements of the Banking Act and is therefore recognised as systemic, the firm would be dual regulated by the FCA and Bank of England.

Regulation by the Bank of England and the Payment Systems Regulator

2.71 Today, the Bank of England regulates and supervises systemic payment systems and service providers for those systems, following the making of a recognition Order by HM Treasury under Part 5 of the Banking Act 2009 that identifies a particular payment system as systemic. Criteria for recognition as a systemic payment system includes: potential disruption to the UK financial system; with factors including likely volume and value of transactions; the nature of transactions and links to other systems, as well as substitutability; and use by the Bank of England in its role as monetary authority. The Bank of England has powers to publish and enforce codes of practice for operators of payment systems and service providers, set system rules, and issue directions.

2.72 At consultation, HM Treasury sought views on proposals to give the Bank of England responsibility for systemic stablecoin payment systems and service providers, noting the concerns of the Financial Policy Committee (FPC) about potential systemic risk. The government proposed continuing to apply a high bar for the recognition of a particular payment system as systemic, as is achieved by the recognition-based process under HM Treasury.

2.73 A similar question on expanding regulatory responsibility was asked in relation to the Payment Systems Regulator which, like the Bank of England, is responsible today for overseeing payment systems, with an ancillary role for participants in those systems.
In its 2021 consultation, the government asked:

1. Whether respondents agreed that Part 5 of the Banking Act should apply to systems that facilitate the transfer of new types of stablecoins.
2. For views on potentially extending Bank of England regulation of wider service providers in the stablecoin chain, where systemic.
3. Whether respondents agreed that Part 5 of FSBRA 2013 should apply to payment systems facilitating the transfer of new types of stablecoins.

2.74 There was general support for the extension of Part 5 of the Banking Act 2009 to systemic stablecoin payment systems where that system meets the amended definition of a ‘payment system’. Several respondents highlighted, however, that most stablecoin arrangements are unlikely to reach the threshold of becoming systemically important to the UK, particularly in the near-term. Some respondents recommended ongoing monitoring until a payment system becomes systemic.

2.75 In turn, the majority of respondents also agreed that Part 5 of the Financial Services (Banking Reform) Act 2013 should apply to payment systems facilitating the transfer of new types of stablecoin. Though several respondents noted that enhanced regulation would need to be balanced against possible impacts on competition and UK competitiveness.

2.76 There was also general agreement that the Bank of England should extend its regulation to service providers where they are deemed systemic or where they provide services in connection with systemic stablecoin payment systems. However, one respondent suggested that effective regulation would require an internationally coordinated approach to supervision, involving other international regulatory bodies, given that arrangements are intended to operate on a cross-border basis.

2.77 Further to the consultation and ongoing dialogue with the independent regulators, the government considers that it is necessary to extend the scope of the Banking Act 2009 to capture relevant stablecoin-based payments systems. The government anticipates broadening the definition of a payment system to include arrangements that facilitate or control the transfer of ‘digital settlement assets’ (or something to that effect), which would be designed to capture stablecoin-based arrangements. Such a digital settlement asset would be drawn broadly, in order to ensure required regulatory flexibility. In line with the Bank of England’s existing powers, where appropriate this would enable supervision of a recognised entity at launch.

2.78 The Bank of England’s Digital Money Discussion Paper\(^\text{18}\) considered the types of stablecoin regulatory models that may be suitable to mitigate risks posed by systemic stablecoins. This included a bank model, in which the stablecoin would be regulated within the existing banking regime, as well as models where the stablecoins

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would be backed by central bank liabilities, deposits at commercial banks, or in high quality liquid assets respectively. The powers under the Banking Act are intended to facilitate regulation in line with any of these models if deemed appropriate for stability purposes. The Bank has published responses to its discussion paper and will consult on a final approach to backing models in due course.

2.79 In turn, the government also intends to extend the scope of the Financial Services (Banking Reform) Act, to capture relevant stablecoin-based systems within the purview of the Payment Systems Regulator. Clarification will be provided so that the legislation operates appropriately for ‘digital settlement assets’.

2.80 Furthermore, the government proposes widening the application of the Banking Act to include a defined set of service providers to which regulation could apply, in particular wallets, but also other entities such as exchanges, or to custodians of stablecoin reserves. These extensions will apply where use is made of ‘digital settlement assets’ and will be framed so as to provide flexibility to account for future developments in stablecoin.

2.81 A similar approach would be adopted in the Financial Services (Banking Reform) Act 2013 to clarify the reach of the Payment Systems Regulator over a defined set of entities to which the regulation will apply, in particular wallets, but also other entities such as exchanges or stablecoin reserves.

2.82 Finally, the government considers that arrangements will be needed to manage risks related to systemic stablecoin failure. This was not included in the government’s consultation; however, the Bank of England’s subsequent discussion paper, published in June 2021, highlighted the importance of appropriate backstop arrangements for these firms to meet the Financial Policy Committee’s expectations and ensure sufficient public confidence.

2.83 Further work will be required to understand if there is a need for a bespoke legal framework for the failure of systemic stablecoin firms and, if so, its design. In the interim, it is important to ensure existing special administration regimes can be effectively applied to stablecoin firms. At present, however, there is arguably a lack of clarity over which special administration regime (SAR) would apply were a systemic stablecoin firm to fail. Furthermore, the fluid and developing nature of stablecoin business models and their use means there is an ongoing risk that models evolve beyond the bounds of the existing frameworks. Amendments are therefore needed to clarify which regime applies and ensure that there are no regulatory gaps in terms of consumer protection and financial stability.

2.84 HM Treasury therefore intends to make appropriate amendments to the Financial Market Infrastructure SAR, and clarify that it, rather than the Payments and E-Money SAR, should (with alterations) apply to systemic stablecoin arrangements. A consultation on the initial amendments deemed necessary will be launched later this year.

Co-responsibility for regulation

2.85 A feature of the current design of UK payments and e-money legislation is a degree of regulatory overlap between the authorities, where responsibilities are distributed across the regulators and they set requirements and oversee firms
pursuant to their differing statutory objectives. Both the Bank of England and Payment Systems Regulator have responsibilities in relation to payment systems but with very different mandates (financial stability and effective competition respectively). The Payment Systems Regulator also has certain responsibilities in relation to participants in payment systems (such as banks or other forms of payment service providers). However, the FCA is the authority primarily responsible for regulating payment services provision.\textsuperscript{20}

2.86 Under the government’s proposal to extend the existing payments and e-money regulatory frameworks to certain stablecoins, further regulatory overlaps will apply. In particular, regulatory overlaps will arise between the Bank of England and FCA. In this scenario, the government expects that the Bank of England will be the lead prudential regulator for systemic stablecoin entities that are also FCA authorised.

2.87 Several respondents sought clarity on how the regime would treat operators or providers that transition from FCA authorisation requirements to Bank of England systemic regulation and called for effective coordination across the UK’s regulatory authorities. Some concerns were raised about the potential for differing requirements, particularly if a stablecoin becomes systemic over time.

2.88 These sorts of regulatory overlaps are managed today through a number of legislative provisions that require the regulatory authorities (and HM Treasury) to consult the relevant parties where appropriate so as to ensure regulatory coherence. While these provisions are effective, the government considers that providing additional clarity as to the application of regulation where there is overlapping regulation would be beneficial.

2.89 To ensure sufficient transparency and a holistic regulatory approach, the government intends to put in place a regime that allows for the clear identification of the applicable regulatory requirements (e.g. in relation to prudential rules) where a payment system is recognised as systemic. In addition, the Bank of England, FCA and Payment Systems Regulator will be required to set out in a clearly accessible and publicly available means their approach to co-regulation.

\textsuperscript{20} The FCA’s mandate for regulating payment services is broad, covering conduct, market integrity, and non-bank prudential regulation, as well as areas of competition. The Payment Systems Regulator’s (PSR) mandate for regulating participants in payment systems is primarily to promote effective competition, innovation, and ensure that user needs are met. The PSR’s current general strategy can be found here: \url{https://www.psr.org.uk/publications/general/the-psr-strategy/}
Call for Evidence on investment and wholesale uses

3.1 In addition to exploring a regulatory framework for stablecoins, the government’s consultation sought stakeholder views on a broader range of questions in relation to cryptoassets used for investment purposes, and the use of DLT in financial markets. In particular, it asked about the benefits and drawbacks of adopting DLT across financial market infrastructures; whether there are obstacles to its adoption; and what further actions government and regulators should consider in this space.

Security tokens

3.2 The use of tokens to facilitate securities transactions is an important development for the financial sector. The representation of traditional securities, such as equities or debt, on a distributed ledger (the ‘tokenisation’ of assets) could have substantial implications for the way assets are traded or capital is raised. Security tokens that exist and are traded exclusively on the distributed ledger (and are therefore ‘digitally native’) are also playing an increasing role across markets.21

3.3 As part of the FCA’s Regulatory Sandbox programme, firms have also compliantly issued equities, bonds and structured products on the Ethereum blockchain. These small-scale tests showed the potential of DLT-based systems to deliver securities issuances more efficiently; faster and cheaper when compared to traditional issuances, while increasing the transparency of ownership. However, the government recognises that existing regimes were not originally intended to support the use of cryptoassets or DLT-based innovations. The call for evidence therefore asked for views on areas of existing regulation where clarification or amendments are needed to support the use of security tokens.

3.4 Respondents noted that existing legislation and definitions provide a good starting point for enabling tokenisation, but stressed the need to provide regulatory certainty by providing guidance and/or amending existing rules early where clear regulatory obstacles to digitisation have been identified. Clarifications to ensure, where possible, that security tokens fall within existing regulations (in particular within the Regulated Activities Order and UK Markets in Financial Infrastructure Directive) were endorsed by many responses. Responses also noted various areas of legislation that would potentially benefit from further clarification and/or amendment. Respondents in particular highlighted areas of existing financial market infrastructure legislation, such as the UK Central Securities Depositories and Settlement Finality Regulations – the responses to these areas are covered in more detail below.

3.5 HM Treasury will work closely with the Bank, FCA and industry to consider what possible changes may be necessary, and the means (i.e. guidance or the need for legislation). Given DLT is at an early stage of adoption, further issues with the existing legislative framework may be identified as DLT is used more widely, meaning

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it is important that a flexible approach is taken to ensure that legislation is able to evolve over time in response to market developments.

DLT-based financial market infrastructure

3.6 DLT is a type of technology that enables the sharing and updating of records in a decentralised way. While there is no standard definition of DLT, DLT systems are characterised by various features, including use of cryptography, distribution of data across multiple participants, the programmability/automation of functions, and (in some cases) decentralisation of control.

3.7 The call for evidence discussed the potential benefits of DLT systems for financial market infrastructure. FMIs such as central securities depositories (CSDs) and central counterparties (CCPs), together with trading venues and other intermediaries, underpin financial market activity in the UK and worldwide. These entities process financial market transactions for a network of otherwise unconnected businesses and individuals. They assist in minimising the costs involved in making payments, settling transactions in financial instruments, or managing overall risk in these transactions. The application of DLT to these processes could have significant consequences for the UK’s financial market. Because of this, the government sought feedback from industry to understand its potential impact on FMIs and financial markets, and to help clarify what policy interventions may be needed now and in the future. The following sections of this document summarise the responses received from the call for evidence on those questions related to DLT based FMI.

The potential benefits of adopting DLT in wholesale markets and FMIs

3.8 Responses noted that, while it is in its infancy in terms of adoption across financial markets, DLT could substantially improve how FMIs operate. However, the realisation of these benefits, as well as potential drawbacks, will likely depend on the type of DLT systems employed and on how implementation is managed. Some of the key potential benefits identified in the Call for Evidence included:

- **Delivering greater operational efficiency.** Most responses highlighted that DLT could streamline and automate existing processes, delivering faster settlement times, more efficient reconciliation arrangements and quicker processing of corporate actions (such as coupon or dividend payments). Many responses emphasised that this could lead to changes in market practices, such as the shortening of settlement cycles, support same day settlement and the reduction of settlement failures (some respondents noted that existing technology could also achieve some of these benefits). Many responses suggested that the use of a single ledger could reduce the fragmentation of processes across different entities (though some responses highlighted the possibility of increased fragmentation, see below). All these outcomes, if realised, could deliver savings both for FMIs and end-users.

- **Reducing risk.** Most respondents suggested that DLT could be used to enable transactions to be settled immediately and with complete certainty (given a record is immutable and cannot be changed). This could reduce
different types of risk (such as the risk of a counterparty failing to fulfil its side of a transaction), with the potential to reduce the amount of capital necessary to hold against such exposures.

- **Improved transparency and traceability of transactions.** Respondents felt that DLT systems could better enable information to be synchronised and shared between participants. This could increase the visibility of financial market activity for both market participants and regulators, who could see market data in real-time. DLT financial market infrastructures could reduce the fragmentation of data across the market ecosystem (given that currently information tends to be held by different intermediaries running separate unsynchronised databases, while on a distributed ledger all information would be available and synchronised immediately on an ongoing basis). Again, some respondents stressed that reducing fragmentation will depend on whether DLT systems are able to interoperate both with each other and with legacy non-DLT systems. Respondents felt that DLT could potentially help enable more direct relationships between market participants (allowing issuers to have more direct relationships with their investors), enable end-investors to be more easily identified, and more easily facilitate know-your-customer and anti-money laundering checks.

- **Increased resilience in FMI services.** DLT-based networks are potentially more able to withstand outages, with its distributed/decentralised nature ensuring that there is no single point of failure, meaning a DLT system could continue to operate despite outages with individual participants.

3.9 **Many respondents suggested DLT could be adopted in different ways by FMIs.** It could enable existing FMIs to provide a more effective service, or it could lead to the appearance of new FMIs using DLT to perform infrastructure services more efficiently. Some respondents suggested that the presence of new FMIs using DLT could create more competition in the provision of FMI services, giving users greater choice. Ultimately, DLT could facilitate disintermediation, by enabling services currently performed by multiple different types of FMI to be carried out on a single distributed ledger, thereby creating new, more integrated forms of FMI. Fewer entities sitting between buyer and seller could potentially mean that trading and post-trade services as a whole could be made more streamlined; conversely, this could introduce risks without the protections facilitated by intermediaries.

3.10 **In the long term, depending on how DLT is implemented, these developments could therefore amount to a fundamental reorganisation of financial markets, with new types of intermediary and potentially altered relationships between market actors (particularly investors and companies).**

### The potential drawbacks of adopting DLT in wholesale markets and FMIs

3.11 **The Call for Evidence also asked about potential drawbacks of adopting DLT across wholesale markets and in FMIs.** Some key drawbacks highlighted in the responses were:
- **Disruption to existing market practices.** Respondents noted that the adoption of DLT could disrupt financial markets, and not always positively. For instance, DLT systems could change trading and settlement lifecycles in a way that potentially increased liquidity requirements (given that users would need to have pre-funded cash and securities available for each settlement, with instantaneous settlement of transactions undermining netting, which offsets and reduces liquidity needs). Some respondents flagged that changing market cycles due to the implementation of DLT could mean the loss of intervals in the market that currently function as a safety measure (for example, if DLT networks were to operate on a 24/7 basis, this could remove the current breaks in trading used for performing maintenance). Continuous trading could also mean markets would not have time to disseminate and adjust to new information, potentially creating a financial stability risk due to disequilibrated pricing.

- **Greater fragmentation:** Many respondents noted that the appearance of new forms of FMI could fragment liquidity pools, particularly if interoperability is not developed, given that post trade activities are currently consolidated and concentrated in few FMIs. Although a DLT system may provide new efficiencies, participants having to join multiple different DLT-based FMIs could face additional costs and burdens. There is a risk that different types or classes of security could be traded on separate venues that are not interoperable, meaning greater fragmentation for users. Inconsistent adoption of DLT across jurisdictions internationally could create fragmentation in global markets.

- **Difficulties in implementation.** Respondents noted the difficulty in evolving out of legacy structures and processes, especially given the significant potential changes to existing business models. DLT-based systems may need to be interoperable with legacy systems, at least in the short- to medium-term, as well as each other, to facilitate any transition. The initial investment required to set up a DLT FMI may be significant, particularly when DLT has yet to be tested at scale (and current market structures work relatively well).

3.12 Respondents emphasised that the extent of any disadvantages may also depend on the type of DLT-based system adopted and could in many cases be mitigated by maintaining aspects of existing systems. For instance, current FMIs are particularly reliant on the need for a central operator responsible for managing the internal functioning of the system, and for ensuring that the system meets its regulatory requirements. A DLT FMI that lacks the functions of central operator may struggle to fulfil these functions, whereas a DLT FMI that does enable some form of central administration may be in the position to do so more effectively.

3.13 Current FMIs also need to ensure that they have suitable and robust participants, while a DLT FMI operating a ‘permissionless’ system (in other words an open network that can be accessed by anyone) may be unable to do this. These issues may mean that certain forms of DLT FMI may not have sufficient governance and systems and controls in order to operate in mainstream financial markets or become acceptable from a regulatory standpoint. Conversely, a ‘permissioned’ system may be better able to deal with these issues, given their ability to manage who can participate on their system.
Respondents noted that some of the changes often associated with DLT systems are not necessarily enabled by DLT alone, though DLT could be an effective way to facilitate such changes. For example, DLT may help deliver 24/7 operation for financial markets, though it is not intrinsically necessary that DLT FMIs would operate on a 24/7 basis (they could potentially use different operating hours if that was the preference of its users), and existing technologies may also be capable of enabling 24/7 operation.

**Shortcomings of the current legislative/regulatory framework**

3.15 The Call for Evidence asked whether UK regulation or legislation supports the adoption of DLT in wholesale markets and FMIs, as well as how regulation and legislation might be optimised for DLT. Respondents cited obstacles to the adoption of DLT in wholesale markets and FMIs in UK law, which require review, and then clarification and/or amendment. It was widely noted by respondents that the current legal and regulatory framework largely pre-dates technologies like DLT. As a result, concepts and terms used in UK legislation and regulation reflect the roles and functions of traditional financial infrastructures and intermediaries and the operation of existing legacy IT systems, and may need to be updated to accommodate new technologies like DLT. Any changes should seek to ensure that legislation remains technology neutral and able to adapt to DLT.

3.16 A central point highlighted by responses was the need for an assessment of the current roles and responsibilities of FMIs. In particular, responses focused on the role of central securities depositories (CSDs), the institutions that hold securities and perform settlement, issuance and maintenance functions, as well as other FMIs. The adoption of DLT may require changes to the UK Central Securities Depositories Regulation (CSDR, Regulation (EU) No 909/2014), the retained EU legislation that sets requirements for the authorisation and supervision of UK CSDs and certain settlement aspects of securities transactions. Respondents particularly questioned the existing requirement in the CSDR that requires trading venues to use a CSD to record/settle securities traded on its platforms, noting that changes to this requirement may be needed to realise the full benefits of DLT (by enabling trading venues to use DLT to record and settle transactions traded on their market). It is also unclear whether the definitions in the CSDR would accommodate how DLT-based systems function, in particular the definition of ‘book-entry’ requirements or a ‘securities account’. Further legislative provisions may need to be revisited, such as those around cash settlement and outsourcing.

3.17 Responses raised fundamental legal questions around the ownership of securities tokenised using DLT, and how they fit within existing legislation. In particular, the Uncertificated Securities Regulations (USRs), which enable units of a security to be evidenced and transferred electronically, were highlighted, given the USRs need to be applied to DLT systems to enable them to evidence transfer of title for each transaction in DLT securities. Respondents stressed that the USRs were not made with DLT in mind and may need to be revised to ensure they are fit for accommodating DLT. Clarity may need to be provided around what constitutes settlement for DLT-based securities (and at what precise point a settlement is said to have occurred in a DLT-based system), to ensure that legal certainty is preserved for
the settlement of transactions. New requirements may also be needed to address new challenges and risks arising from DLT such as smart contracts and cyber security risks. There are also potential conflicts of law issues should a DLT network have nodes in multiple jurisdictions.

3.18 Some respondents identified other areas of legislation that may contain barriers to use of DLT in markets. Definitions and provisions in UK MiFID were identified as in need of clarification/amendment, as well as those in the UK Settlement Finality Regulations and Financial Collateral Regulations. Respondents also highlighted potential changes to provisions in other relevant legislation such prospectus rules, the Companies Act, the UK EMIR, GDPR, MAR, AIFMD, UCITS, EBR, OEIC Regulations, the FCA CASS rules and the FCA COLL handbook.

3.19 Given the relatively limited amount of experience firms have with using DLT for FMI services, it may still be difficult for firms to identify all provisions in legislation that could act as a barrier to the use of DLT FMIs in future. Further obstacles in legislation may become more apparent as use of DLT becomes more widespread, meaning a degree of legislative and regulatory flexibility may be required.

Views on the adoption of DLT in wholesale markets, market coordination and common standards

3.20 The Call for Evidence also sought views regarding industry incentives or obstacles to adopting DLT in wholesale markets; on whether there is a need for market coordination; and on the adoption of common standards. Responses noted that the potential benefits (outlined above) provided a strong rationale to allow for the adoption of DLT, while noting the challenges to adopting DLT around an uncertain regulatory framework, the investment/resourcing costs and lengthy timeline for implementation. The small scale of current experiments may mean that there may not always be full consideration of how DLT FMIs could or should interact with other post trade products and services, and what the impact on markets as a whole will be.

3.21 Responses noted that market coordination could entail a variety of initiatives, with the use of sandboxes, expert working groups, and developing standards (particularly those facilitate interoperability and appropriate governance) all endorsed by respondents. Respondents highlighted national and supranational bodies that are engaged on the issues relating to DLT- adoption, such as the FSB, the BIS Innovation Hub and Global Financial Innovation Network (GFIN). Responses noted that coordination at international level, particularly through participation in both regulator and industry forums, would ensure better outcomes for cross border activity, such as by collectively developing best practices and setting international standards.

Role of government and regulators in facilitating DLT in financial markets

3.22 The Call for Evidence asked about what the UK government and regulators should be doing to help facilitate the adoption of DLT/new technology across financial markets and FMIs. Most responses suggested that optimising the UK’s legal and regulatory framework as the key priority for government and regulators. Respondents encouraged the government to work with market participants when modifying the
UK’s regulatory framework to ensure that it responds to the needs of the financial services industry.

3.23 Respondents noted that there is a need to test solutions, in order to learn from practical experience how DLT will be adopted in FMI s. This should entail enabling firms to request exemptions/modifications to requirements that are obstacles to using DLT in UK legislation. Regulatory sandboxes were regularly cited as an effective way of trialling and nurturing new technologies. The FCA Sandbox was emphasised as a positive tool for UK policymakers, given it enables a balanced understanding of the benefits and the risks to be gained, with insights then used to inform policy making and supervisory practice (with the caveat that the FCA Sandbox tests solutions within the existing rules, and does not allow changes to legislation). Several responses also cited similar approaches taken in other jurisdictions, in particular the EU pilot regime, as providing benefits here. Respondents were supportive of some form of sandbox or pilot regime as a stepping-stone towards the development of permanent market changes.

3.24 Respondents highlighted several further ways the government could incentivise industry to explore DLT based systems, including through tax incentives and grants.

Government response to the Call for Evidence on DLT in FMI s

3.25 The government recognises that using DLT to provide the FMI services that underpin financial markets could unlock substantial benefits, enabling present-day processes to become more efficient, transparent, less costly, and more resilient. There are also potential risks that need to be managed, particularly in the disruption to existing market practices and the potential fragmentation in the provision of FMI services (both between DLT and legacy systems and between DLT systems themselves). DLT could radically change the way wholesale markets operate, with existing intermediaries and business models replaced by DLT-based entities, though it is likely that DLT and non-DLT systems will operate side-by-side for at least the medium term.

3.26 After considering the responses to the Call for Evidence, the government recognises that existing financial services regulation and legislation were drafted without DLT in mind, meaning current legislative provisions may contain obstacles or ambiguities which hinder the adoption of DLT, or mean it is difficult to realise the potential benefits fully. The government intends to support industry in ensuring that legislation and regulation can accommodate tokenisation and DLT in FMI s.

3.27 While legislative changes are likely to be required, it is not yet fully clear how and where these changes should be made. Responses to the call for evidence therefore called for a sandbox-style regime whereby participants could request exemptions from or modifications to existing legislation, in order to facilitate testing of DLT in FMI s and enable the UK authorities to gain a better understanding around the legislative changes necessary to accommodate DLT.

3.28 Following consideration of the views shared in the call for evidence and industry feedback, in April 2021, the Chancellor announced that HM Treasury would partner with the FCA and Bank of England to develop a Financial Market Infrastructure (FMI) Sandbox. This would support firms wanting to test new technologies or
structures, in particular (but not necessarily limited to) DLT, to provide the infrastructure services that underpin markets (such as trading and settlement). We anticipate that the sandbox will do this by creating a regulatory framework that is temporarily modified for participating entities, where existing rules, regulation and legislation currently act as a barrier to adoption. Participants would still have to meet the high regulatory standards expected of existing FMIs, and regulatory outcomes, in particular those relating to financial stability and cyber security, should continue to be safeguarded. This will give industry the opportunity to use DLT to provide FMI services (and be able to test in the market), but in a controlled manner and with appropriate regulatory oversight. It should enable HM Treasury and the regulators to understand if and how FMI legislation needs to be amended permanently to accommodate DLT.

3.29 The FMI Sandbox will be up and running in 2023. Multiple iterations of the Sandbox, whereby testing can take place for different market functions and activities, may ultimately be taken forward. In terms of the technology being tested, the government intends to ensure that the scope of the Sandbox can go potentially wider than DLT, to allow innovation with other solutions which may not strictly be DLT-based, but where other similar benefits could be delivered. This will safeguard the principle of technological neutrality emphasised by many responses to the Call for Evidence.

3.30 HM Treasury intends to legislate for powers that will enable it to set up the FMI Sandbox (and potentially multiple iterations of the Sandbox) when Parliamentary time allows. We expect further consultation with industry in advance of HM Treasury introducing secondary legislation to set out the detailed legislative framework of the Sandbox.

3.31 In designing the Sandbox, HM Treasury, working with regulators and industry, will need to address the following issues:

- The relevant legislation that may be modified or disapplied for Sandbox participants, in cases where it does not support new technologies such as DLT and where there is a clear case for doing so. Currently, we envision including provisions covered by retained EU law and legislation transposing EU law (CSDR, MiFIR, SFD, FCARs) and existing UK law (USRs, FSMA, FSMA Recognition Requirements, FSMA Regulated Activities Order, UK company law).

- The types of entity that will have access to the Sandbox. For example, the sandbox could support certain types of trading venue, such as Multilateral Trading Facilities (MTFs), who want to provide CSD-type functions (such as issuance, settlement, and securities maintenance) in addition to trading.

- The requirements that Sandbox participants will need to meet in order to maintain the high standards expected of existing FMIs. For example, were the Sandbox to include trading venues performing securities settlement functions, this trading venue will be subject to an appropriate set of regulatory requirements (such as the relevant rules from UK CSDR), adapted to enable the use of DLT for settlement, while maintaining high regulatory standards overall. We would also expect Sandbox participants to have clear business plans setting out how they intend to ‘scale up’ (and exit the Sandbox) in a safe manner, as well as the ability to wind down their operations without causing wider disruption to the market.
• The **nature and scale** of activities permissible within the Sandbox, to reflect that it is designed to safely test new innovative arrangements, structures and new requirements in the market. Given the experimental nature of the Sandbox, these are necessary in order to avoid entities in the Sandbox operating at a level that poses risks to financial stability. This may include setting restrictions on the types of securities that are in scope, limits on the volumes of transactions that Sandbox entities can trade/settle, and limits/thresholds on the value of securities that can be issued in the Sandbox. We will need to consider whether or not participating firms could offer their services to wholesale markets only or potentially to retail investors as well.

• The **roles and responsibilities** of the regulators with regards to the running of the sandbox and providing oversight of participants.

3.32 Lessons learned from the Sandbox could support permanent rule changes, and we will seek to ensure that HM Treasury and the regulators have the ability to make changes to legislation quickly in response to feedback from the Sandbox, again in consultation with industry.

3.33 The government will continue to assess, on the basis of industry feedback, where changes could be made permanently to legislation, provided such changes do not undermine existing regulatory outcomes. Certain new features of DLT which are not covered by existing legislation may need new requirements, such as smart contracts, private wallets, and private keys, which the government will consider how to take forward. How to handle and address new issues and risks arising from how DLT functions (such as the functioning of smart contracts and cyber security) would need to be considered. The government is aware that DLT is one of many technologies touted to deliver significant improvements in financial markets and will seek to ensure that technological neutrality remains at the core of its approach to changing legislation. It will consider these issues within the wider context of the proposed Future Regulatory Framework, as well as via the FMI Sandbox.

3.34 The government will continue to work together with industry and regulators to assess the impact of DLT adoption on markets as a whole. This may particularly focus on the scenario where DLT and non-DLT technologies operate alongside one another, where there is a need to mitigate possible negative impacts such as fragmentation. The government will therefore consider carefully the suggestions made around market coordination and particularly on setting common standards both within the UK and internationally, to encourage innovation while maintaining financial stability.

**Other UK work to explore the use of DLT and digital technologies, including Central Bank Digital Currencies**

3.35 A number of respondents to the call for evidence noted the potentially important role central bank digital currencies (CBDC) could play in facilitating the adoption of DLT in financial markets. The UK is continuing to play a leading role in exploring the opportunities and risks of CBDCs, and similar innovations which could support more efficient settlement in wholesale space. At Fintech Week 2021, the Chancellor announced a new Taskforce led by HM Treasury and the Bank of England to lead the UK’s exploration of a retail CBDC, with separate forums to engage civil
society and technology experts throughout. The government and the Bank of England have not yet made a decision on whether to introduce a CBDC in the UK, and will engage widely with industry.

3.36 On 16 April 2021 the Bank of England launched a new omnibus account model. These accounts allow operators of payments systems to hold funds in the omnibus account to fund their participants’ balances with central bank money. Operators of new and existing payment systems can apply to the Bank to open an omnibus account. We anticipate that this will facilitate the emergence of innovative payment services, making use of the security of central bank money settlement. Systemically important payment systems accessing omnibus accounts would be supervised by the Bank under the existing regulatory framework.

3.37 In addition, London is now home to the new Bank of International Settlements Innovation Hub. The London hub is focusing its work on CBDC and innovative market infrastructures amongst other topics, and the Bank is working closely with the Hub. One of the Hub’s projects this year focuses on how payments in RTGS infrastructures could be linked (synchronised) with digital asset ledgers and payment systems in other currencies. The Bank has also experimented through its Fintech Accelerator and conducted a proof of concept to enable the renewed RTGS to link to innovative DLT-based infrastructures.
Chapter 4
Unregulated tokens and new market developments

3.38 As part of the call for evidence the government sought evidence on risks, opportunities and regulatory issues relating to unregulated cryptoassets such as Bitcoin and Ether, where used primarily as an investment or a means of return.

3.39 Most respondents who answered the question saw merit in exploring further the case for comprehensive regulation of services facilitating investment and trading of unregulated tokens. Some respondents argued that applying strict requirements could force consumers to use exchanges and other service providers based overseas which may seek to offer services to UK consumers without protections or oversight. A number of respondents highlighted the importance of an open dialogue with the industry.

3.40 The Call for Evidence also sought evidence on newer cryptoasset developments, namely decentralised finance, which is a fast-growing sector within the cryptoasset landscape, encompassing a variety of different activities – such as lending – on decentralised applications using protocols.

3.41 A common theme among responses was that decentralised finance is a nascent and fast-evolving technology, which adds an additional layer of complexity and innovation to the cryptoasset ecosystem, but currently requires a high level of technical understanding. Several respondents highlighted the potential of decentralised finance to reinvent and disrupt existing financial service business models in more efficient and effective structures, offering improved savings yields for example and cheaper remittances. With it also comes the opportunity for regulatory arbitrage and the need to ensure that, regardless of technology, the principle of “same risk, same regulatory outcome” applies.

3.42 Respondents provided feedback a range of specific risks relating to decentralised finance, including: theft through security breaches; disruption and financial losses from governance or protocol bugs or errors; risks that decentralised finance protocols could be used to facilitate financial crime; legal and regulatory challenges relating to an absence of originating legal controlling body which can be held liable in the case of fraud or failure. A number of respondents, who answered this question, recommended continuing to monitor decentralised finance and considering consumer awareness measures to communicate risks as well as further guidance on how activities may fall within the current FCA perimeter.

3.43 Following consideration of the responses, HM Treasury is continuing to assess the appropriate regulatory response to broader cryptoassets (i.e. beyond stablecoins used as a means of payment). In line with stakeholder views, the government will continue to monitor this fast-growing area of financial services, and will work collaboratively with the UK financial regulators and industry to consider appropriate future regulation. The government will also continue to work closely with international partners, to ensure common standards which enable innovation and harmonise guidance and concepts. HM Treasury will consult later in 2022 on its proposed approach.
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This document can be downloaded from www.gov.uk

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